CPC COOPERATIVE PATENT CLASSIFICATION

F23L AIR SUPPLY DRAUGHT-INDUCING SUPPLYING NON-COMBUSTIBLE LIQUID OR GAS (air-supply arrangements for fluent fuels F23C ; dampers and throat restrictors for open fire-places F24 ; air inlet valves for open fire fronts F24)

Guide heading:

F23L 1/00 **Passages or apertures for delivering primary air for combustion**

F23L 1/02 . by discharging the air below the fire

F23L 3/00 **Arrangements of valves or dampers before the fire**

F23L 5/00 **Blast-producing apparatus before the fire**

F23L 5/02 . Arrangements of fans or blowers (fans or blowers per se F04)

F23L 5/04 . by induction of air for combustion, e.g. using steam jet

F23L 7/00 **Supplying non-combustible liquids or gases, other than air, to the fire, e.g. oxygen, steam**

F23L 7/002 . {Supplying water }

F23L 7/005 . . { Evaporated water; Steam }

F23L 7/007 . {Supplying oxygen or oxygen-enriched air }

F23L 9/00 **Passages or apertures for delivering secondary air for completing combustion of fuel**

F23L 9/02 . by discharging the air above the fire

F23L 9/04 . by discharging the air beyond the fire, i.e. nearer the smoke outlet

F23L 9/06 . by discharging the air into the fire bed

F23L 11/00 **Arrangements of valves or dampers after the fire**

F23L 11/005 . {for closing the flue during interruption of burner function }

F23L 11/02 . for reducing draught by admission of air to flues

F23L 13/00 **Construction of valves or dampers for controlling air supply or draught** (in general F16K)

F23L 13/02 . pivoted about a single axis but having not other movement (formed as linked slats each pivoted about an axis F23L 13/08)

F23L 13/04 . . with axis perpendicular to face

F23L 13/06 . slidable only

F23L 13/08 . operating as a roller blind
operating as a venetian blind

F23L 13/10 . having a compound movement involving both sliding and pivoting

F23L 15/00 **Heating of air supplied for combustion**

F23L 15/02 . Arrangements of regenerators

F23L 15/04 . Arrangements of recuperators

F23L 15/045 . . {using intermediate heat-transfer fluids }

F23L 17/00 **Inducing draught**

F23L 17/005 . {using fans }

F23L 17/02 . Tops for chimneys or ventilating shafts
Terminals for flues

F23L 17/04 . . Balanced-flue arrangements, i.e. devices which combine air inlet to combustion unit with smoke outlet

F23L 17/06 . . branched
T-headed

F23L 17/08 . . with co-axial cones or louvres

F23L 17/10 . . wherein the top moves as a whole

F23L 17/12 . . Devices for fastening the top or terminal to chimney, shaft, or flue

F23L 17/14 . . Draining devices

F23L 17/16 . Induction apparatus, e.g. steam jet, acting on combustion products beyond the fire

F23L 99/00 **Subject matter not provided for in other groups of this subclass**

Guide heading:

F23L 2700/00 **Installations for increasing draught in chimneys**
Specific draught control devices for locomotives

F23L 2700/001 . Installations for increasing draught in chimneys

F23L 2700/002 . Specific draught control devices for locomotives

Guide heading:

F23L 2900/00 Special arrangements for supplying or treating air or oxidant for combustion Injecting inert gas, water or steam into the combustion chamber

F23L 2900/00001 . Treating oxidant before combustion, e.g. by adding a catalyst

F23L 2900/05021 . Gas turbine driven blowers for supplying combustion air or oxidant, i.e. turbochargers

F23L 2900/07001 . Injecting synthetic air, i.e. a combustion supporting mixture made of pure oxygen and an inert gas, e.g. nitrogen or recycled fumes

F23L 2900/07002 . Injecting inert gas, other than steam or evaporated water, into the combustion chambers

F23L 2900/07003 . Controlling the inert gas supply

F23L 2900/07004 . Injecting liquid or solid materials releasing oxygen, e.g. perchlorate, nitrate, peroxide, and chlorate compounds, or appropriate mixtures thereof

F23L 2900/07005 . Injecting pure oxygen or oxygen enriched air

F23L 2900/07006 . Control of the oxygen supply

F23L 2900/07007 . using specific ranges of oxygen percentage

F23L 2900/07008 . Injection of water into the combustion chamber

F23L 2900/07009 . Injection of steam into the combustion chamber

F23L 2900/15021 . using regenerative heat exchanger bodies with different layers of material

F23L 2900/15022 . using pre-purging regenerator beds

F23L 2900/15041 . Preheating combustion air by recuperating heat from ashes

F23L 2900/15042 . Preheating combustion air by auxiliary combustion, e.g. in a turbine

F23L 2900/15043 . Preheating combustion air by heat recovery means located in the chimney, e.g. for home heating devices

F23L 2900/15044 . Preheating combustion air by heat recovery means using solar or other clean energy